TOPIC 15: COMPLICATIONS OF DIABETES: KIDNEY DISEASE (NEPHROPATHY)

STATEMENT OF THE PROBLEM

People with diabetes are at risk for kidney disease due to high blood glucose and high blood pressure. Once present, kidney damage cannot be reversed so it is important to maintain blood glucose and blood pressure within target range and to have regular routine screening to prevent and detect problems early.

KEY MESSAGES

1. Not everyone with diabetes develops kidney disease.
2. Kidney damage may be prevented by keeping the blood sugar in near normal range (A1c less than 7%)
3. Kidney damage may be prevented by keeping the blood pressure less than 140/80 mmHg

BACKGROUND

The kidneys filter out waste products in our body. Over time, high blood sugar and high blood pressure can damage the filtering units within the kidneys, called nephrons. Nephropathy is a serious disease of the kidneys. Once damage occurs, it can't be reversed. Untreated kidney disease usually worsens over time. Eventually the kidneys may fail all together, resulting in the need for a kidney transplant or dialysis. It's important to screen for kidney disease regularly in order to start treatment at the earliest sign of strain/damage to the kidneys.

The test used to detect early kidney problems is a urine test called a microalbumin screen. It is a test designed to measure very small amounts of protein. This test can indicate possible early damage to the nephrons of the kidney.

If there is a small amount of protein noted in the urine, people with diabetes may be put on medications to help protect their kidneys. The medication is also used to treat high blood pressure, but may be prescribed even without high blood pressure.

A blood test to check for kidney function (creatinine) may also be done on a regular basis to track how the kidneys are performing.

HOW CAN I PREVENT KIDNEY DAMAGE?

Kidney damage has been shown to occur when blood sugar and blood pressure are higher than normal over time. Preventing kidney damage is linked with keeping the blood sugars and blood pressure in the normal range.

The following are recommendations for preventing kidney damage:

- Keep your A1c in the target range of less than 7%
- Ask your health care provider to have your urine microalbumin and blood creatinine checked at least annually
- Keep your blood pressure below 140/80 (or lower if recommended by your doctor/health care provider)

These materials were adapted from *Type 2 Diabetes: A Curriculum for Patients and Health Professionals,* American Diabetes Association, 2002.

- Seek treatment for bladder infections, which can lead to kidney infections and possible damage

PATIENT OUTCOMES/GOALS

By the end of the educational session, the client with diabetes will be able to:

- State that near normal blood sugar levels may help prevent nephropathy
- Identify one other way that kidney damage may be prevented

CHW ACTIONS	PARTICIPANT ACTIONS
• Discuss measures for preventing kidney disease: maintaining A1c at less than 7%, keeping blood pressure less than 140/80mmHg, and getting early treatment for bladder infections. • Encourage discussion with the health care provider about the proper interval for regular screening for kidney disease (should be at least 1x/year or more often if risk factors present).	• Work to maintain blood glucose and blood pressure with target range. • Ask health care provider how often screening for kidney disease should occur. • Take any medications prescribed to help prevent or slow kidney disease.

TOOLS/TEACHING AIDES

- None

HANDOUTS

1. **Topic 15 Coversheet**.....English | Spanish

2. **Protect Your Kidneys**.....English | Spanish
   Source: Learning About Diabetes, Inc. 2006

3. **Action Plan**.....English | Spanish
   Source: Public Health – Seattle & King County

REFERENCES

Type 2 Diabetes: A Curriculum for Patients and Health Professionals, American Diabetes Association, 2002.

The Joslin Guide to Diabetes: A Program for Managing Your Treatment, Beaser, R.S. Fireside ed./Joslin Diabetes Center, 2005.

These materials were adapted from *Type 2 Diabetes: A Curriculum for Patients and Health Professionals,* American Diabetes Association, 2002.

American Diabetes Association. http://www.diabetes.org/living-with-diabetes/complications/kidney-disease-nephropathy.html

These materials were adapted from *Type 2 Diabetes: A Curriculum for Patients and Health Professionals,* American Diabetes Association, 2002.

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